

CLAIMS

1. A method for aligning tubulars, which method comprises the steps of:
  - a) securing a lower tubular in slips;
  - b) aligning an upper tubular with said lower tubular with a remotely actuable apparatus;
  - c) memorizing the position of said stabbing guide when said upper tubular is aligned with said lower tubular;
  - d) connecting said upper tubular and said lower tubular;
  - e) releasing said slips;
  - f) lowering said upper tubular and said lower tubular;
  - g) securing said upper tubular in said slips;
  - h) gripping a tubular to be connected to said upper tubular in said apparatus;
  - i) causing said apparatus to move said tubular to said memorized position;
  - j) adjusting the position of said tubular, if necessary; and
  - k) connecting said tubular to said upper tubular.
2. A method according to Claim 1, wherein step (c) is carried out after step (d).
3. A method according to Claim 1, further comprising the step of:
  - l) memorising the position of the apparatus after step (j).
4. An apparatus for aligning tubulars, which apparatus comprises a remotely controllable head adapted to guide a tubular, characterised in that said apparatus is provided with sensing means responsive to the position of said head and means to memorise a position of said head, and means operative to return said head to said operative position.
5. An apparatus as claimed in Claim 4, wherein said apparatus comprises a telescopic arm (109) which supports said head (112).

6. An apparatus as claimed in Claim 5, wherein said sensing means comprises a linear transducer which is associated with said telescopic arm (109.)
7. An apparatus as claimed in Claim 6, wherein said linear transducer forms part of a piston-and-cylinder which is used to extend and retract said telescopic arm (109).
8. An apparatus as claimed in Claim 5, wherein said telescopic arm (109) is mounted on a rotor (104) which is pivotally mounted on a base (103).
9. An apparatus as claimed in Claim 8, including a piston-and-cylinder assembly (106) which is arranged to act between said base (103) and said rotor (104) to pivot said rotor (104) relative to said base (103).
10. An apparatus as claimed in Claim 9, wherein said sensing means comprises a linear transducer associated with said piston-and-cylinder assembly (106).
11. An apparatus as claimed in Claim 10, wherein said linear transducer forms part of said piston-and-cylinder assembly (106).
12. An apparatus as claimed in Claim 5, wherein said telescopic arm 109 is movable between an operative position in which it is generally horizontal and an inoperative position in which it extends upwardly.
13. An apparatus as claimed in Claim 12, including a piston-and-cylinder assembly (131) for moving said telescopic arm (109) between its operative and inoperative positions.
14. An apparatus as claimed in Claim 5, further comprising a remote control panel having a "memory" button which, when actuated, will memorise the position of

- 12 -

said head (112), and a "recall" button which, when actuated, will return said head (112) to its memorised position.

15. An apparatus as claimed in Claim 5, wherein said head is provided with devices for holding a tubular, and wherein means are provided for remotely adjusting the position of said devices to accommodate tubulars of differing diameters.

16. A method of facilitating the connection of an upper tubular to a lower tubular, which method comprises the steps of applying complex motion to the upper tubular as it is inserted into said lower tubular, characterised in that said complex motion is provided mechanically.

17. A method according to Claim 16, wherein said complex motion is applied by an apparatus.

18. A method according to Claim 16, wherein said complex motion is derived from a recording of complex motions applied to an upper tubular by a skilled operator performing said complex motions manually.